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What is claimed is:

1 1. A method of processing and storing data in a
2 computer system including processor circuitry, and a data
3 storage device, the method comprising the steps of:

4 storing first and second sets of records in
5 separate first-in, first-out data structures,
6 respectively, on the data storage device, the first and
7 second sets of records being of different data
8 resolutions and corresponding to overlapping periods of
9 time;

10 operating the processor circuitry to receive
11 data collected over a period of time; and

12 operating the processor circuitry to update at
13 least one record in each of the stored first and second
14 sets of records with the received data such that a
15 previous record included in each of the first and second
16 data structures is replaced;

17 periodically collecting network traffic data,
18 wherein the collected network traffic data includes byte
19 and packet count information associated with each of a
20 plurality of monitored conversations between devices
21 included in the computer system;

22 storing the collected network traffic data in a
23 buffer; and

24 operating the processor circuitry to retrieve
25 network traffic data from the buffer, the retrieved
26 network traffic data being received by the processor
27 circuitry;

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28 wherein the step of operating the processor
29 circuitry to update at least one record in each of the
30 stored first and second sets of records includes the
31 steps of:

32 updating a record corresponding to a first
33 conversation in the first set of records; and

34 updating a record corresponding to the first
35 conversation in the second set of records.

1 30. The method of claim 7, further comprising the step
2 of:

3 allocating fixed amounts of storage space on
4 the data storage device for storing each one of the first
5 and second first-in, first-out data structures used to
6 store the first and second sets of records.

1 31. The method of claim 7, wherein the first set of
2 records include hourly records and the second set of
3 records includes daily records.

1 32. The method of claim 7,
2 wherein the network traffic data stored in the
3 buffer includes time stamp information indicating the
4 period of time in which the network traffic data was
5 collected; and

6 wherein the step of operating the processor
7 circuitry to update at least one record in each of the

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8 stored first and second sets of records includes the step
9 of:

10 examining at least one time stamp included in
11 the buffered network traffic data.

1 33. The method of claim 7,

2 wherein the processor circuitry includes first
3 and second central processing units, and

4 wherein the step of operating the processor
5 circuitry to update at least one record in each of the
6 stored first and second sets of records includes the step
7 of operating the first processor to update the first set
8 of records while operating the second processor to update
9 the second set of records.

1 34. The method of claim 7, wherein the computer system
2 further includes a display device, the method further
3 comprising the step of:

4 displaying data corresponding to overlapping
5 periods of time at different resolutions on the display
6 device.

1 35. A computer system for monitoring network traffic
2 data comprising:

3 a memory;
4 a data storage device; and
5 a processor to execute instructions stored in
6 the memory,
7 wherein the memory stores:

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8 instructions to store first and second
9 sets of records in separate first-in, first-out data
10 structures, respectively, on the data storage device, the
11 first and second sets of records being of different data
12 resolutions and corresponding to overlapping periods of
13 time;

14 instructions to receive data collected
15 over a period of time;

16 instructions to update at least one record
17 in each of the stored first and second sets of records
18 with the received data such that a previous record
19 included in each of the first and second data structures
20 is replaced;

21 instructions to periodically collect
22 network traffic data, wherein the collected network
23 traffic data includes byte and packet count information
24 associated with each of a plurality of monitored
25 conversations between devices included in the computer
26 system;

27 instructions to store the collected
28 network traffic data in a buffer; and

29 instructions to retrieve network traffic
30 data from the buffer, the retrieved network traffic data
31 being received by the processor;

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32 wherein the instructions to update at least one
33 record in each of the stored first and second sets of
34 records include instructions to:

35 update a record corresponding to a first
36 conversation in the first set of records; and

37 update a record corresponding to the first
38 conversation in the second set of records.

1 36. The computer system of claim 35, wherein the memory
2 further comprises instructions to:

3 allocate fixed amounts of storage space on the
4 data storage device for storing each one of the first and
5 second first-in, first-out data structures used to store
6 the first and second sets of records.

1 37. The computer system of claim 35, wherein the first
2 set of records include hourly records and the second set
3 of records includes daily records.

1 38. The computer system of claim 35,
2 wherein the network traffic data stored in the
3 buffer includes time stamp information indicating the
4 period of time in which the network traffic data was
5 collected; and

6 wherein the instructions to update at least one
7 record in each of the stored first and second sets of
8 records include instructions to:

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1 examine at least one time stamp included in the
2 buffered network traffic data.

3 39. The computer system of claim 35,
4 wherein the processor includes first and second
5 central processing units, and
6 wherein the instructions to operate the
7 processor to update at least one record in each of the
8 stored first and second sets of records includes
9 instructions to operate the first processor to update the
10 first set of records while operating the second processor
11 to update the second set of records.

1 40. The computer system of claim 35 further including a
2 display device, the memory further comprising
3 instructions to:
4 display data corresponding to overlapping
5 periods of time at different resolutions on the display
6 device.

1 41. A computer program product system for monitoring
2 network traffic data, said computer program product
3 comprising a computer usable medium having computer
4 readable program code means embodied in said medium for
5 causing a processor in a computer to:
6 store first and second sets of records in separate
7 first-in, first-out data structures, respectively, on a
8 data storage device, the first and second sets of records
9 being of different data resolutions and corresponding to
10 overlapping periods of time;

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1 receive data collected over a period of time;
2 update at least one record in each of the stored
3 first and second sets of records with the received data
4 such that a previous record included in each of the first
5 and second data structures is replaced;

6 periodically collect network traffic data, wherein
7 the collected network traffic data includes byte and
8 packet count information associated with each of a
9 plurality of monitored conversations between devices
10 included in the computer system;

11 store the collected network traffic data in a
12 buffer; and

13 retrieve network traffic data from the buffer, the
14 retrieved network traffic data being received by the
15 processor;

16 wherein the causing the processor to update at least
17 one record in each of the stored first and second sets of
18 records includes:

19 updating a record corresponding to a first
20 conversation in the first set of records; and

21 updating a record corresponding to the first
22 conversation in the second set of records.

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1 42. The computer program product of claim 41, wherein
2 the computer readable program code means further causes
3 the processor to:

4 allocate fixed amounts of storage space on the
5 data storage device for storing each one of the first and
6 second first-in, first-out data structures used to store
7 the first and second sets of records.

1 43. The computer program product of claim 41, wherein
2 the first set of records include hourly records and the
3 second set of records includes daily records.

1 44. The computer program product of claim 41,
2 wherein the network traffic data stored in the
3 buffer includes time stamp information indicating the
4 period of time in which the network traffic data was
5 collected; and
6 wherein the computer readable program code
7 means to update at least one record in each of the stored
8 first and second sets of records includes computer
9 readable program code means to examine at least one time
10 stamp included in the buffered network traffic data.

1 45. The computer program product of claim 41,
2 wherein the processor includes first and second
3 central processing units, and

4 wherein the computer readable program code
5 means to update at least one record in each of the stored
6 first and second sets of records includes computer
7 readable program code means to operate the first

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8 processor to update the first set of records while
9 operating the second processor to update the second set
10 of records.

1 46. The computer program product of claim 41 wherein the
2 computer readable program code means further causes the
3 computer to display data corresponding to overlapping
4 periods of time at different resolutions on a display
5 device.